

Fig. 1

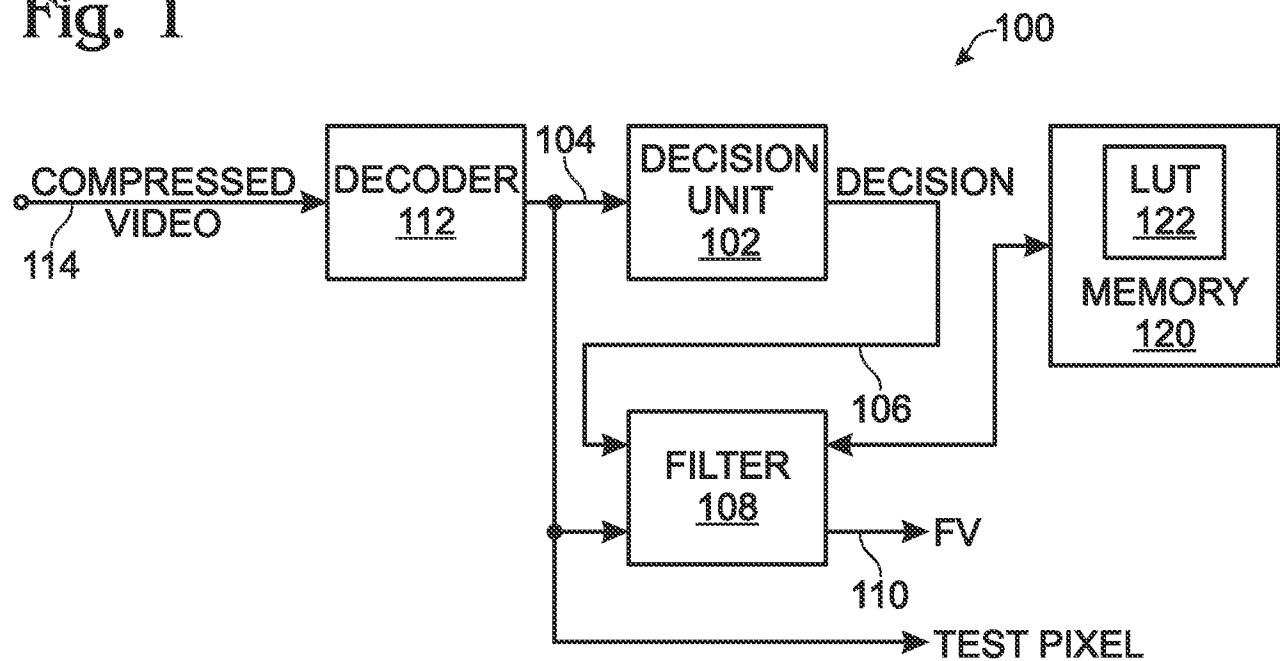


Fig. 2

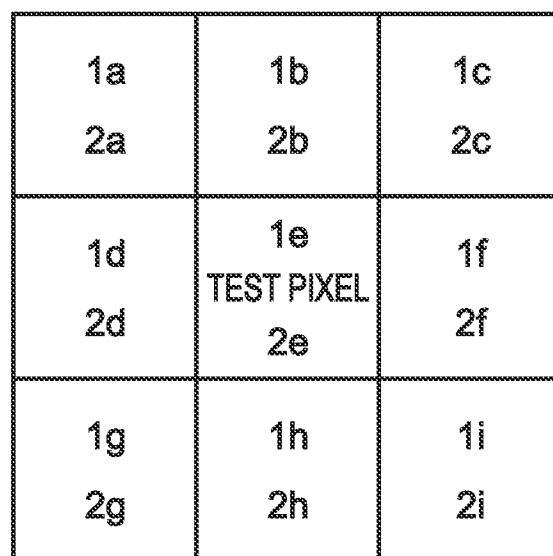


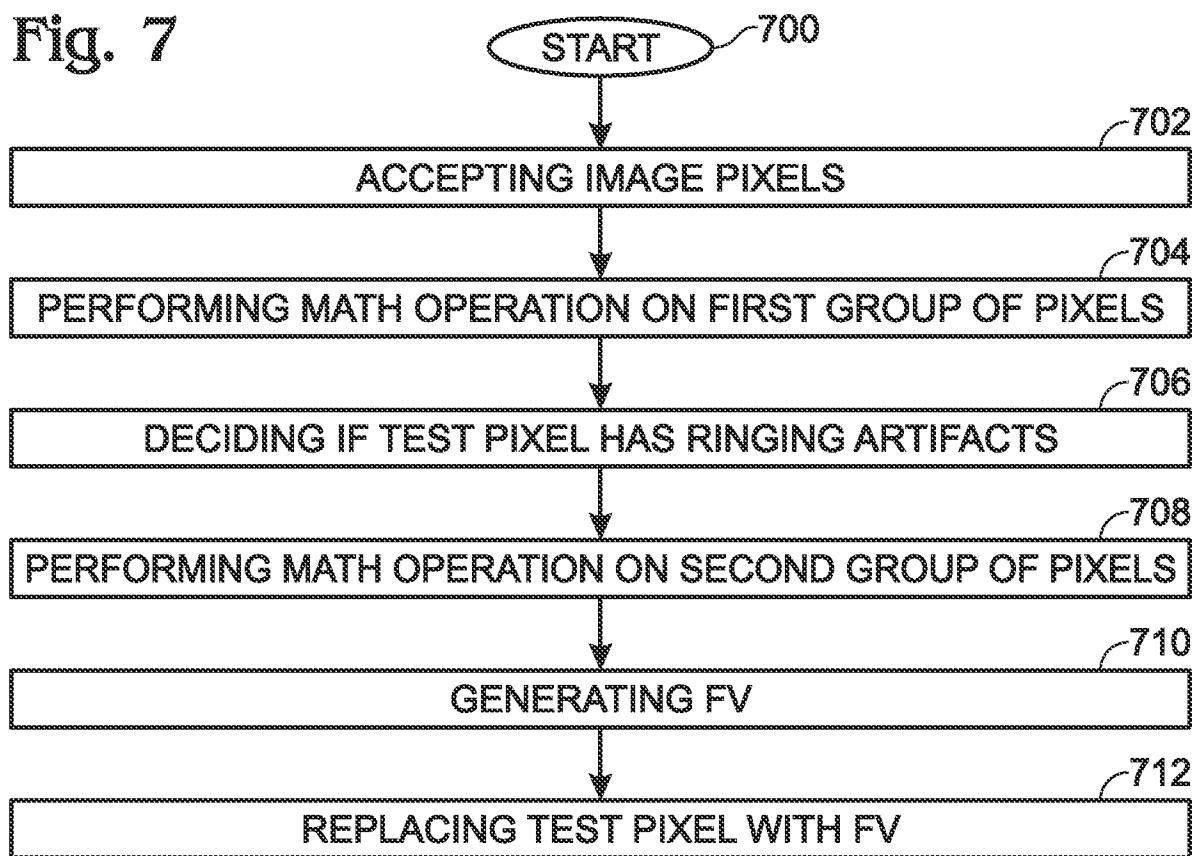
Fig. 3

nE	TIMES ADDED	TIMES SUBTRACTED	TIMES RIGHT-SHIFTED	
1	1	0	1	
2	2	0	2	
3	1	0	2	
4	4	0	3	
5	3	0	3	
6	2	0	3	
7	1	0	3	
8	1	1	3	

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Fig. 7



```
if(De-ringing filter) // De-ringing filter decision made by decision stage
{
    nE=0;
    newVal=0;

    for(ix=1;ix<=1;ix++)
        for(iy=-1;iy<=1;iy++)
        {
            if(Map(i + ix, j + iy)==0)
            {
                if((ix!=0 || (iy!=0))
                {
                    newVal = newVal + I(i+ix, j+iy);
                    nE++;
                }
            }
        }

    if(nE==1)
    {
        I(i, j)+((newVal +I(i, j) +1)>>1);
    }
    else if(nE<4)
    {
        for(ii=nE;ii<4;ii++)
        {
            newVal = newVal + I(i, j);
        }
        I(i, j)=(( newVal +2)>>2);
    }
    else if(nE<8)
    {
        for(ii=nE;ii<8;ii++)
        {
            newVal = newVal + I(i, j);
        }
        I(i, j)=((rAug+4)>>3);
    }
    else if(nE==8)
    {
        I(i, j)=(( newVal- I (i + 1, j + 1) + I(i, j) +4)>>3);
    }
}
```

Fig. 4

Fig. 5

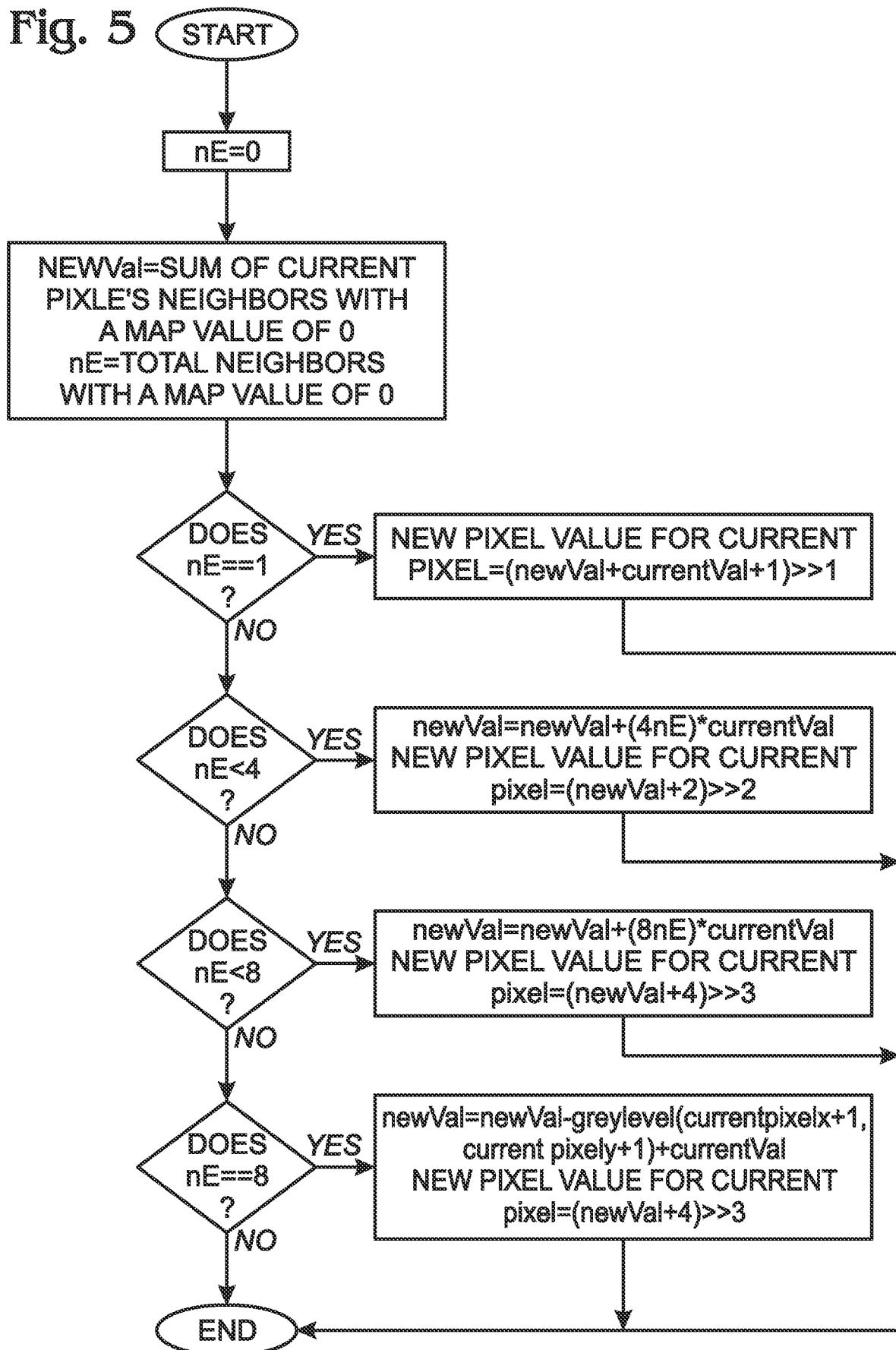


Fig. 6

